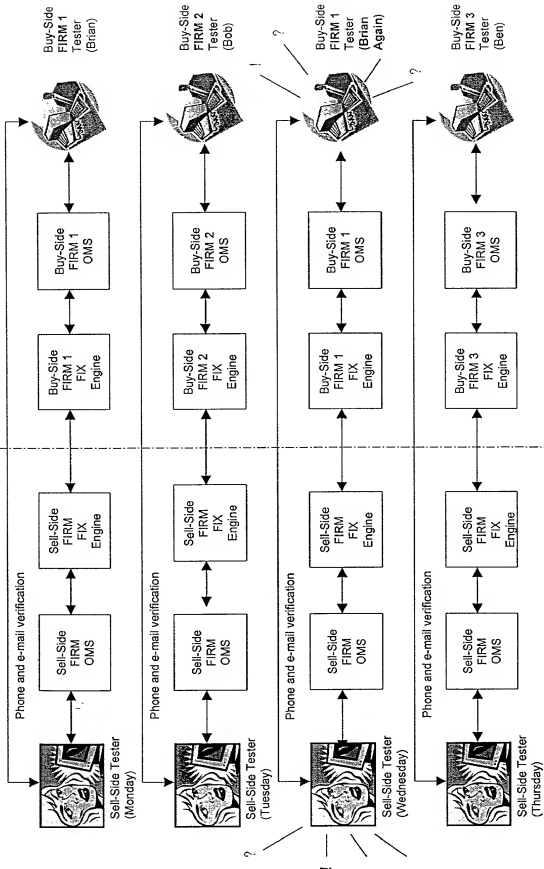


Manual Certification (*Prior Art*)

Sell-Side FIRM

Buy-Side FIRMS 1 → X

0955375.091701

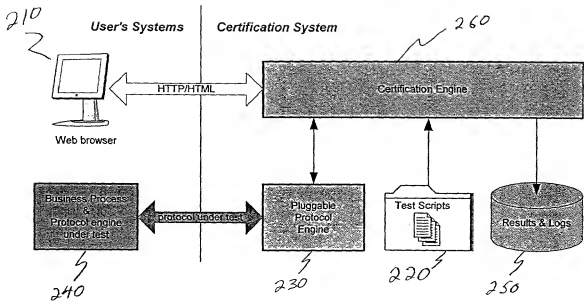


FIG. 2

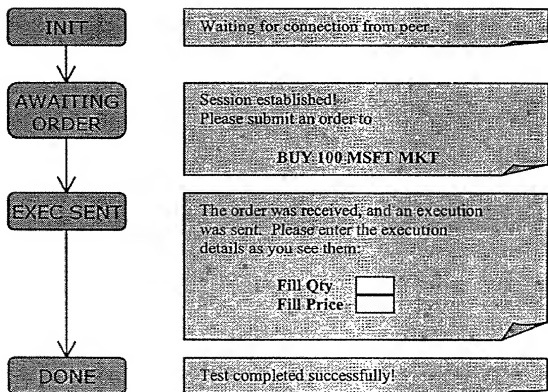
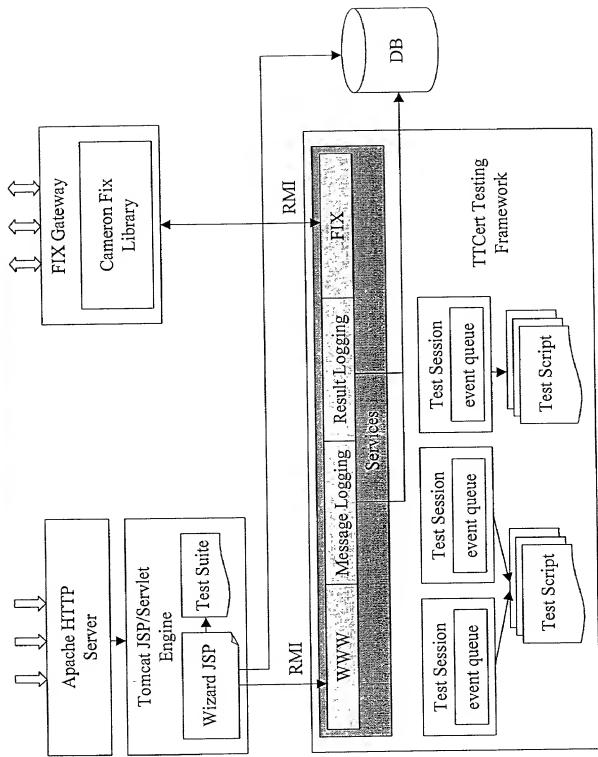
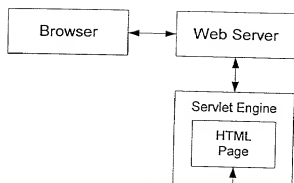


FIG. 2A





ttCERT Test Session Overview

- ① Has Accompanying Enlargement
- ② Has Accompanying Enlargement

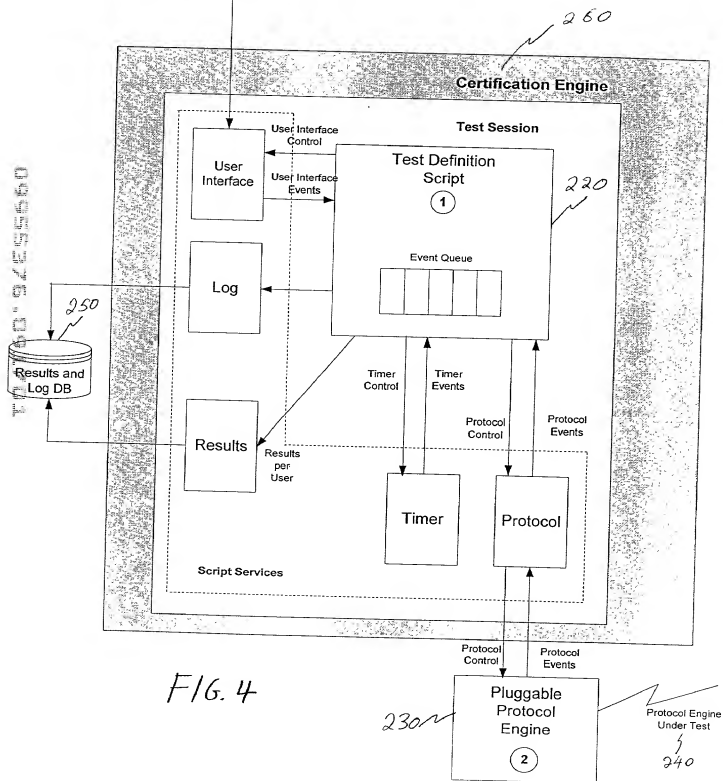


FIG. 4

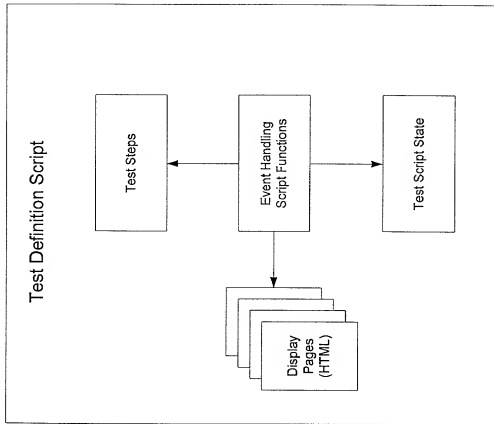
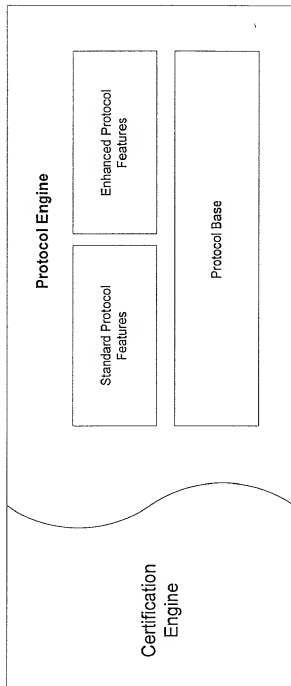


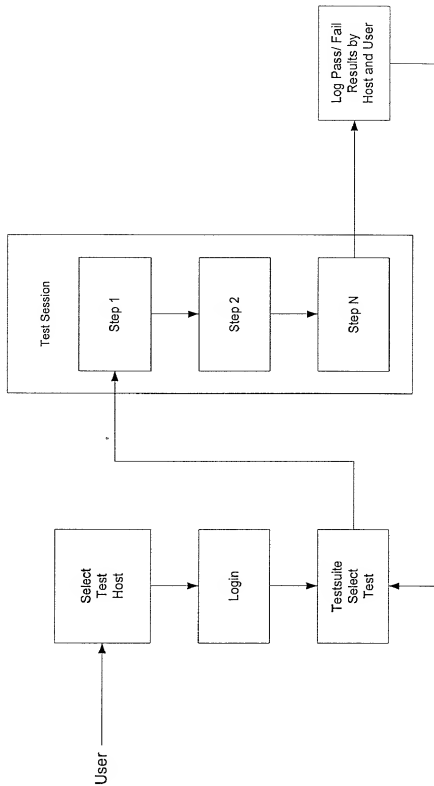
FIG. 5



F16.6

0895560 9/25/98

Testing Workflow



F16.7

820 830 840 870



OpenFIX Trading Services

Test Suite: FIXSessionLevelTestCases 1/60

Preferences

* Set Preferences

Manage preferences for running the OpenFIX test

View Logs | [Required] passed

820 830 840

FIX Session-Level Test Cases

* 1. Initiate or Accept Logout

View Logs | [Required] passed

* 4. Send Heartbeat Message

View Logs | [Required] failed

* 5. Receive Heartbeat Message

View Logs | [Required] Not Tested

* 6. Send Test Request

View Logs | [Required] Not Tested

* 7. Receive Test Request

View Logs | [Required] Not Tested

* 8. Receive Resend Request Message

View Logs | [Required] Not Tested

* 9. Synchronize Sequence Numbers

View Logs | Not Tested

* 11. Receive Sequence Reset (Reseq)

View Logs | [Required] Not Tested

* 12. Initiate Logout Process

View Logs | [Required] Not Tested

* 13. Receive Logout Message

View Logs | [Required] Not Tested

* 18. Support Third-Party Addressing

View Logs | Not Tested

* 19. Test PossResend Handling

View Logs | Not Tested

2 and 3. Receive Message Standard Header and Trailer

Welshie, Transactools, Inc.

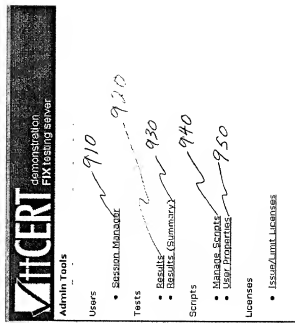
The list at left reflects your current configuration testing status.

Click on any of the incomplete tests to begin.

For assistance, please consult the discussion boards, or contact us at support@transactools.com

F/6, 8

TOCT60' 92555660



F/G. 9

Active Certification Sessions (as of 14:21:40) [Refresh]

demo

TransactTools, Inc. () [Logout]
<hr/>	
Web Session	
Status:	Logged In
Login Time:	Thu May 17 14:20:35 EDT 2001
Last Activity Time:	Thu May 17 14:21:40 EDT 2001
Time Inactive:	01010
Last Request:	/cert/demo/cert/admin/session.jsp
FIX Certification Test Session	[Shutdown] [Reset FIX] [View Log]
Status:	In Progress
Script:	D1 - (Connect to server)
Start Time:	umiD1:1
FIX Connection Status:	[Thu May 17 14:21:35 EDT 2001]
IP Address:	Not Connected
Last Sent:	N/A
Last Received:	N/A

F/16.16

107760*3255560

transactiontools
Optimizing Training Services

POWERED BY CNET

Manage Scripts
Test Suite Admin Help Logout

Current directory: /

Subdirectories

Directory Name

score

000

1110

1130

 # Files
 4 files
 2 files

Files

File Name	Last Modified	Size
1.xml	07/24/2001 11:09	4021
10.xml	07/24/2001 11:09	5935
11.xml	07/24/2001 11:09	4871
12.xml	07/24/2001 11:09	4734
13.xml	07/24/2001 11:09	3944
14a.xml	07/24/2001 11:09	3754
14b.xml	07/24/2001 11:09	3709
14c.xml	07/24/2001 11:09	3861
14d.xml	07/24/2001 11:09	3711
14e.xml	07/24/2001 11:09	3846
14f.xml	07/24/2001 11:09	3784
14g.xml	07/24/2001 11:09	3708
14h.xml	07/24/2001 11:09	3750
14i.xml	07/24/2001 11:09	5152
14j.xml	07/24/2001 11:09	5729
14k.xml	07/24/2001 11:09	3752
14l.xml	07/24/2001 11:09	4503
14m.xml	07/24/2001 11:09	4554
18.xml	07/24/2001 02:07	3731
19.xml	07/24/2001 01:31	3795

FIG. 11

YD/T60-325560

POWER BY ZTE

transacttools
Your Business Partner

Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>
Upload:	<input type="text"/>	<input type="button" value="Browse"/>

1210

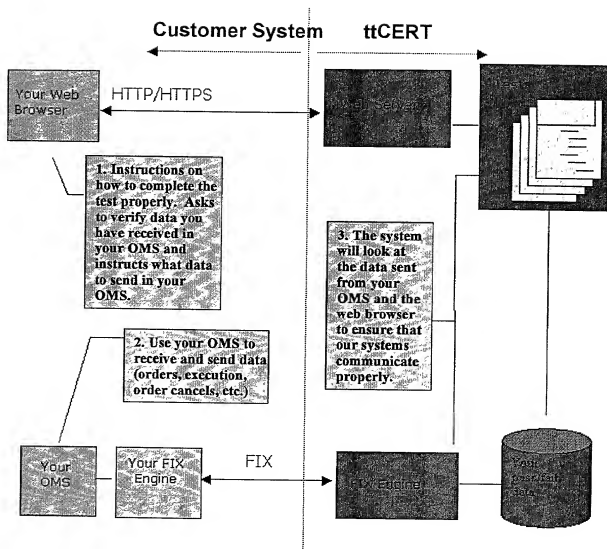
Transfer File(s) 2-1220

Test Suite Manage Scripts Help Logout

File Upload

FIG. 12

0
0
0
0
0
0
0
0
0
0
0
0



F/G. 13

702760 24255660

POWERED BY



iTransact
Options Trading Service

Zach Zimmer, TransactTools Inc.
[View Log](#) | [About](#) | [Discussion](#) | [Help](#) | [Logout](#)

Order Fill

Steps

Cancel the Order
Submit Order
Verify Order
Verify Fill
Test Complete

Send an Order

Please enter and send the following order from your trading application:

Sell 1500 AOL at a limit price of 40

Waiting for order...

Help

Enter and send an order from your trading application to the test server.

The test server will verify that the order is sent successfully and contains correct information.

refresh

FIG. 14

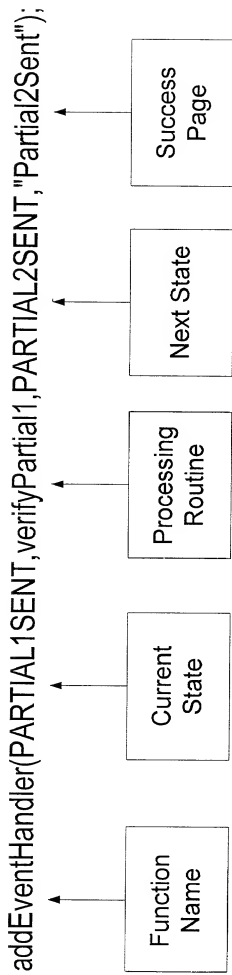


FIG. 15

FOZT60*9ZE99660


 Order & Execution Tools
 Order & Execution Tools

 Zach Zimmerer, TransactTools, Inc.
 New and About Discussion Help Logout

Order Fill

Steps

 Connect to Server
 Verify Order Ack
 Verify Fill
 Test Complete

Verify Order Ack

The test server has sent you an acknowledgement for your order.
 You should see that your order has been accepted by the test server and
 is now in a "working" or "live" state.

Do you see that the order has been accepted?

☒ Yes ☐ No

Warnings: (see Help at right for more details)

Field 52(SendingTime): Your time (Thu Aug 02 13:42:31 EDT 2001) is more
 than 1 minute away from the host time (Thu Aug 02 13:41:16 GMT-0400 (EDT)
 2001)

Help

The order you sent was
 received and validated by the
 test server and a confirmation
 was sent by the test server
 back to your trading application.

Your trading application should
 indicate to you that an ack
 ("accept" -- as opposed to
 reject) was received for the
 order. If not, and if the
 order is now "live".

NOTE: Some trading
 applications simply move the
 new order into a "working"
 orders' window or depicts that
 the order has moved from a
 "pending" to a "live" state. It is
 not important how the ack is
 represented, only that you
 know the order is actively being
 traded at the broker.

Warnings:

- The sending time on this
 message is more than 1
 minute off of the accepted
 time. This is up to 1 minute
 to account for clock
 differences, but we encourage
 you to sync your servers
 clock to the same time to
 minimize this difference.

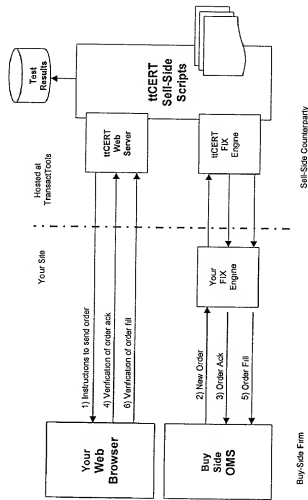
refresh ▲ |

1610

1620

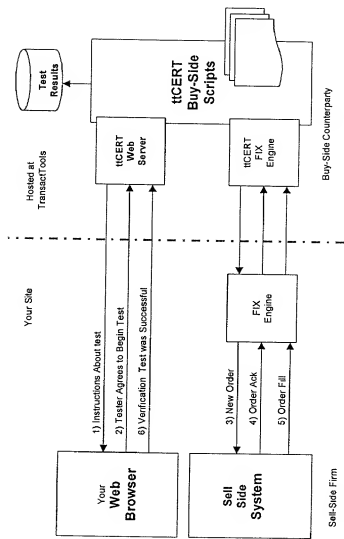
1630

FIG. 16



Buy-Side Firm testing against a Sell-Side Counterparty that has used the iCERT scripts to emulate its FIX behavior

FIG. 17



Sell-Side Firm testing against a Buy-Side Counterparty that has used the tTCERT scripts to simulate its FIX behavior

FIG. 18

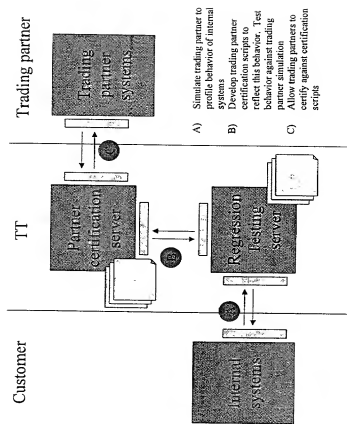


FIG. 19

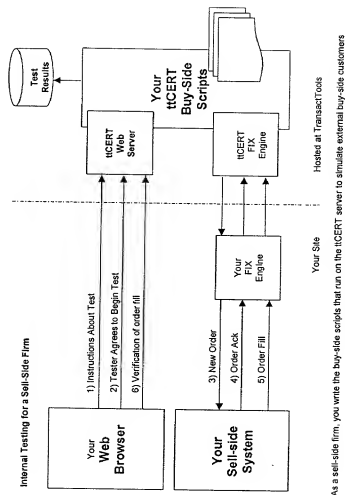
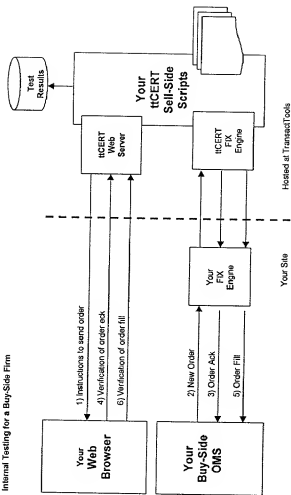


FIG. 20

Internal Testing for a Buy-Side Firm



As a buy-side firm, you write the sell-side scripts that run on the ttCERT server to simulate your sell-side customers

FIG. 21

Internal Testing of Automated Scripts - Running Buy-Side Scripts Against Sell-Side Scripts

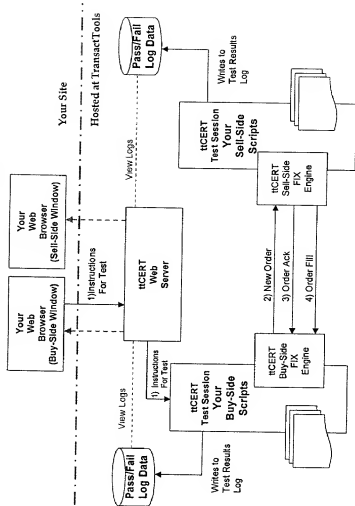


FIG. 22

Loop Back Testing

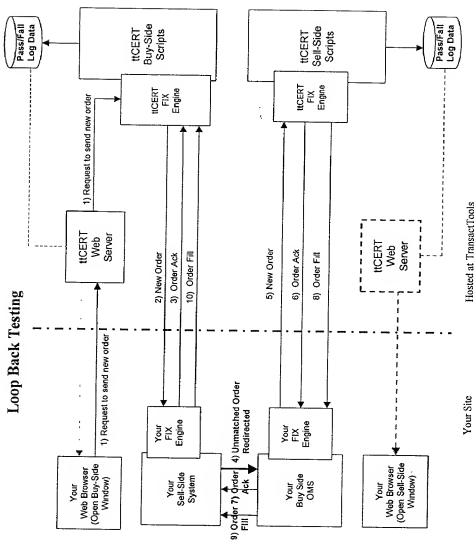


FIG. 23